

## Job Title: Programmer/Analyst 4

**Department:** Information Systems

**Classification (Payroll Title):** Programmer/Analyst 4

**Position Number:** 106478

**Reports to:** CIO

**Last Revised Date:** 12.4.2019

**Department of Education Vision:** *We will set all students on a path to success.*

**Priorities:** **Academics:** All Tennessee students will have access to a high quality education, no matter where they live. · **Whole Child:** Tennessee public schools will be equipped to serve the academic and non-academic needs of all students. · **Educators:** Tennessee will set a new path for the education profession and be the top state to become and remain a teacher and leader.

**Position Summary:** As the TN DOE embarks on the implementation of the Strategic Plan, data processing and analysis will become ever more important in IT's role in the implementation of those strategic initiatives. The role of the Data Engineer will be critical in ensuring we build usable and scalable databases, datamarts, and reporting structures from which we can enable Quality Academic Programs, Whole Child Support, and create high-performing Teachers and Leaders.

### Minimum Qualifications:

- College degree in Computer Science or related field, or equivalent work experience
- 5 plus years' work experience in database design, including 1 year as Data Modeler / Architect

### Essential Functions

- Design conceptual data models to support the TDOE, using best practices for standard naming conventions and coding practices.
  - Create and maintain the physical databases for the TDOE in a large scale, multi-tenant environment.
  - Utilize key design principles for data architecture to handle large data sets that support scalability, extensibility, MDM, and point-in-time reporting capability.
  - Work closely with product, data, and application development teams to support existing projects and implement agency data improvement strategies.
  - Design and build the infrastructure/tools required for optimal extraction, transformation, and loading of data from a wide variety of data sources using SQL and Azure 'big data' technologies
  - Ability to work in an agile software development environment.
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**Knowledge, Skills, & Abilities**

- Thorough knowledge and understanding of data modeling in RDBMS platforms(i.e. SQLServer 2012), experience with Big Data required.
- Experience with longitudinal data warehouses, data lake projects (data modeling, metadata, data quality), 'big data' data pipelines, architectures and data sets.
- Working knowledge of message queuing, stream processing, and highly scalable 'big data' data stores.
- Experience with ETL tools (SSIS, Talend, etc) and SQL necessary
- Experience with Azure Databricks, DataFactory necessary.
- Demonstrated expertise with Python preferred
- Knowledge for C#, Entity Framework experience a plus

**Supervisory Responsibility**

None at this time.

**Work Environment**

The duties will primarily be carried out indoors, in environmentally controlled conditions. The employee will be required to perform general physical abilities and handle and move objects.

**Physical Demands**

Physical demands include walking, standing, bending, lifting, climbing stairs, and moving during working hours.

**Position Type and Expected Hours of Work**

This is a full time position. Expected work hours are 37.5 hours per week, from 8-4:30pm with an hour lunch break.

**Travel**

None required at this time.

**Other Duties**

Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for their job. Duties, responsibilities, and activities may change at any time with or without notice.

*Pursuant to the State of Tennessee's Workplace Discrimination and Harassment policy, the State is firmly committed to the principle of fair and equal employment opportunities for its citizens and strives to protect the rights and opportunities of all people to seek, obtain, and hold employment without being subjected to illegal discrimination and harassment in the workplace. It is the State's policy to provide an environment free of discrimination and harassment of an individual because of that person's race, color, national origin, age (40 and*

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*over), sex, pregnancy, religion, creed, disability, veteran's status or any other category protected by state and/or federal civil rights laws.*

*Tennessee Department of Education also provides reasonable accommodations to qualified applicants and employees with disabilities. If you need an accommodation during the application process, please contact the Human Capital team at 615-741-5158. You can also direct your request for accommodation in writing to the Tennessee Department of Education, Attn: Human Capital Division, 710 James Robertson Pkwy., Nashville, TN 37243.*